

Work Order ID 61569

Page 1

Monday, August 30, 2010 11:24:35 AM

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube RH

Start Date: 8/30/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/6/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *R*

Date: 10-8-30

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2750

Rev F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 005

*Sidor/23**for CL 10-9-21**B61569*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 	Skidtubes	0.00				1	-		BE 10/09/01
Skidtubes	Memo	0.00							
Skidtubes	1- Pick D2600-3 Bent								
	2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill fwd step holes using DT9616. Ensure proper positioning.								
	6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B) ***ONLY DRILL ONE SIDE OF FWD SADDLE HOLES USING DT8150***								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***								
	8- Clecko DT9642 and drill fwd saddle holes on second side, ensure proper positioning.								
	9- Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)								
	10- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to								

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Run Start

Stop

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0.297".

11-Open up holes of Detail A to 0.297" (total of 2 holes per side)

12-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left
from bending as per QSI 004A/R Aluminum Rod batch: ☐ m114877

13-Grind welds flush as per Dwg D2750

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

BE 10/09/01
BE 10/09/01

1 _____ 100503

1 _____ 100303

Dart Aerospace Ltd

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Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

10-9-7

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

x/ - BE 10/09/07

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160



Skidtubes

Skidtubes

0.00

0.00

Memo

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐ Sikaflex-291 batch: 115114 ☐ ☐
exp. date: 11/01/30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R ☐ Aluminum Rod batch: M114877 BE 10/09/13

9- At section AP-AP drill out x-bolt spacer to 0.404" BE 10/09/13

10-Grind welds flush as per Dwg D2750 DP 10-9-14

11-Spot face ground handling holes section (total of 4 places per side) as per BE 10-09-14

10-9-7

BB 10/09/08

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Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

dwg D2750

12-Deburr holes

BE 10-09-14

170

QC10- Inspect visual per QSI004- ground welds

0.00

8/10/09/14



QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

8/10/09/14



QC

Memo

0.00

Quality Control

(20)

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00 0.00		10/09/15		1	0		
200  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 1114841 Memo START TIME: 1:00pm OVEN TEMPERATURE: 320°F FINISH TIME: 1:30pm	0.00 0.00		10/09/15		1	0		
210  QC Quality Control	QC3- Inspect Part Finish Memo Inspect for foreign object per QSI 024	0.00 0.00		10/09/20		0			

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

0.00

=> M 10/09/20

1

0



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ Install inserts as per dwg D2750

230

0.00

=> M 10/09/20

1

0



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ 1-Inspect for Foreign Objects

✓ 2-Spray inside of tube with "LPS-3"
batch: N/A3-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: M115114EXP DATE: 11/01

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

✓ A/R 55-o-ring lube batch: M114189

5-Coat all exposed fasteners with "LPS Procyon"

batch: M114596

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/30/2010



250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10/9/22

260

QC4- 100% Inspect kits for completeness

0.00



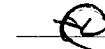
QC

Memo

0.00

Quality Control

8/30/2010



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270	Packaging	0.00							
									
Packaging	Memo	0.00	Loc 72	See H					
Packaging	Package as per PPP D350-636-012								
280	QC21- Final Inspection - Work Order Release	0.00							
									
QC	Memo	0.00							
Quality Control									

10/09/27
mr
10-9-27

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item Name: Skidtube RH

Start Date: 8/30/2010


Required Date: 9/6/2010

Start Qty: 1.00


Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4,13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq 110 DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS4-1032-225		Purchased	No			220	Each	5,418.000	38	38			
<div>  </div>													
Insert													

Location	Loc Qty	Loc Code
PK011	5418	
(110768)	5418	

AN3C5A		Purchased	No			230	Each	1,072.000	34	34			
<div>  </div>													
Bolt													

Location	Loc Qty	Loc Code
ST350	1062	
114330	11	
115015	251	
(115108)	300	
115316	300	
115371	100	
115422	100	
ST351	10	
113121	10	

HL 10/09/20

438

HL 10/09/20

834

W/O:		WORK ORDER CHANGES					
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Start Date: 8/30/2010



Required Date: 9/6/2010

Start Qty: 1.00



Required Qty: 1.00

AN3C6A	Purchased	No	230	Each	353.0000	4	4
							yl 10/09/20
BOLT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST351	353	
111982	353	

AN6C44A	Purchased	No	230	Each	129.0000	4	4
							yl 10/09/20
BOLT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	2	
103964	2	
ST344	127	
111649	2	
114653	1	
114941	75	
115030	49	

AN8C35A	Purchased	No	230	Each	41.0000	1	1
							yl 10/09/20
BOLT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1	
110847	1	
ST346	40	
114442	15	
115188	25	

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Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332
R Purchased No

230 Each 155.0000 38 38



washer



10/09/20

Location

Loc Qty

Loc Code

ST245

155

107534

29

M115000

X38

109545

54

111548

72

AN960C816L Purchased No

230 Each 0.0000 1 1



WASHER NAS1149C08332R / M114915

D2745 Manufactured No

230 Each 173.0000 8 8



Bushing



10/09/20

Location

Loc Qty

Loc Code

ST023

173

52311

5

59112

68

y8

61203

100

D3488-042 Manufactured No

230 Each 13.0000 1 1



Blade Fitting Assembly, RH



10/09/20

Location

Loc Qty

Loc Code

FP008

13

53918

1

59643

12

X1

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Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3492-041

Manufactured No

230 Each

57.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP013

57

B61649

59114

1

61311

56

Y8

D3492-043

Manufactured No

230 Each

23.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP

2

54682

2

FP013

21

B61503

59117

1

59190

4

61207

16

Y8

D3535-25

Manufactured No

230 Each

10.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

10

59623

10

Y1

D3536-25

Manufactured No

230 Each

11.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP12

11

59625

11

Y1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:40 AM

Work Order ID: 61569

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230 Each

8.0000

3

3



Wearpad



10/09/20

Location

Loc Qty

Loc Code

FP

1

B61640

x3

55465

1

FP017

48

FP17

7

57713

3

60491

4

D3631-1

Manufactured No

230 Each

475.0000

8

8



Washer



10/09/20

Location

Loc Qty

Loc Code

ST072

201

60755

201

x8

ST076

274

52693

206

54388

68

D3672-1

Manufactured No

230 Each

921.0000

4

4



Phenolic Washer



10/09/20

Location

Loc Qty

Loc Code

ST077

921

42329

150

52505

771

x4

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Monday, August 30, 2010 11:24:40 AM

Work Order ID: 61569

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3791-1 Manufactured No 230 Each 9.0000



Wearplate

1 1
JH 10/09/20

Location Loc Qty Loc Code

FP17 9
58573 8
59626 1

X1

D3793-1 Manufactured No 230 Each 15.0000



Wearshoe

1 1
JH 10/09/20

Location Loc Qty Loc Code

FP18 15
59151 1
59630 2
61244 12

X1

D3793-3 Manufactured No 230 Each 14.0000



Wearshoe

1 1
JH 10/09/20

Location Loc Qty Loc Code

FP18 13
59631 1
61258 12
FP19 1
57947 1

V1

D3794-1 Manufactured No 230 Each 7.0000



Gasket

1 1
JH 10/09/20

Location Loc Qty Loc Code

FP010 7
57942 7

V1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Monday, August 30, 2010 11:24:40 AM

Work Order ID: 61569

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3794-3 Manufactured No

230 Each

12.0000

1

1



Gasket



41 10/09/20

Location

Loc Qty

Loc Code

FP10

1

60826

1

FP18

11

56066

10

59153

1

21

MS21043-6

Purchased No

230 Each

678.0000

4

4



NUT



41 10/09/20

Location

Loc Qty

Loc Code

ST301

678

112314

678

24

MS21083C8

Purchased No

230 Each

30.0000

1

1



NUT



41 10/09/20

Location

Loc Qty

Loc Code

ST303

30

113845

7

44934

23

21

NAS1611-010

Purchased No

230 Each

259.0000

8

8



O-RING



41 10/09/20 PTO

Location

Loc Qty

Loc Code

FP

259

110715

100

110915

159

Monday, August 30, 2010 11:24:40 AM

Shop Packet Print

Page 7

Dart Aerospace Ltd

W/O: 61569		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/09/20	230	Replace NAS1611-010 O-rings with D25943 B59358	ll	10/09/20	x8		S 10/09/20

Part No: D350-636-012 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:40 AM

Work Order ID: 61569

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

NAS1611-013

Purchased

No

230

Each

103.0000

8

8



O-RING



10/09/20

Location

Loc Qty

Loc Code

FP

103

14451

3

115460

100

X 8

AN8C21A

Purchased

No

250

Each

43.0000

2

2



BOLT



10/9/22 sl

Location

Loc Qty

Loc Code

ST345

43

113558

3

114653

40

AN960C816L

Purchased

No

250

Each

0.0000

1

2



WASHER



11/19/41 10/9/22

D2741

Manufactured

No

250

Each

14.0000

1

1



Blade, 350 Skidtube



10/9/22 sl

Location

Loc Qty

Loc Code

ST466

14

57949

14

D3493-1

Manufactured

No

250

Each

34.0000

2

2



Washer



10/9/22 sl

Location

Loc Qty

Loc Code

ST065

34

59127

4

60873

30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:40 AM

Page 9

Work Order ID: 61569

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3532-1
Spacer

Manufactured No

250 Each

19.0000

2

2

Location

Loc Qty

Loc Code

ST068

19

60510

19

D3672-13
Phenolic Washer

Purchased No

250 Each

828.0000

2

2

Location

Loc Qty

Loc Code

ST077

828

54363

828

MS21083C8
NUT

Purchased No

250 Each

30.0000

1

2

Location

Loc Qty

Loc Code

ST303

30

113845

7

114934

23

D2600-3-BENT

Manufactured No

110 Each

9.0000

1

1

Extrusion Bent

Location

Loc Qty

Loc Code

LG

59410

9

D2744

Manufactured No

110 Each

27.0000

1

1

Cap

Location

Loc Qty

Loc Code

LG

59198

27

27

Monday, August 30, 2010 11:24:40 AM

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Page 9

10/9/22 sf
B616730

10/9/22 sf

MISS94 10/9/22 sf

10-8-31

8E 10/09/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:40 AM

Work Order ID: 61569

Parent Item: D350-636-012


Parent Item Name: Skidtube RH

Start Date: 8/30/2010

Required Date: 9/6/2010


Start Qty: 1.00

Required Qty: 1.00

D2739 Manufactured No 160 Each 2.0000 1 1

 350 I Beam


Location	Loc Qty	Loc Code
LG 61637	2	
61256	2	

1
 8
 BE 10/09/08

D2743 Manufactured No 160 Each 211.0000 8 8

 Crossbolt Spacer


Location	Loc Qty	Loc Code
LG	211	
50281	10	
57953	2	
59111	199	

8
 4
 BE 10/09/13

D3490-3 Manufactured No 160 Each 47.0000 4 4

 Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG	47	
60294	10	
61218	37	

4
 4
 BE 10/09/13

D3490-1 Manufactured No 160 Each 85.0000 4 4

 Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG	85	
59424	3	
61217	82	

4
 BE 10/09/13

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 4529-
BS10-8-30

RELEASED

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	DART AEROSPACE USA, INC.		
DRAWN	PORT HADLOCK, WA		
CHECKED	DRAWING NO.	REV. F	
MFG. APPR.	D2750	SHEET 1 OF 11	
APPROVED	TITLE	SCALE	
DE APPR.	350 SKIDTUBE ASSEMBLY	NTS	
DATE	08.07.16		

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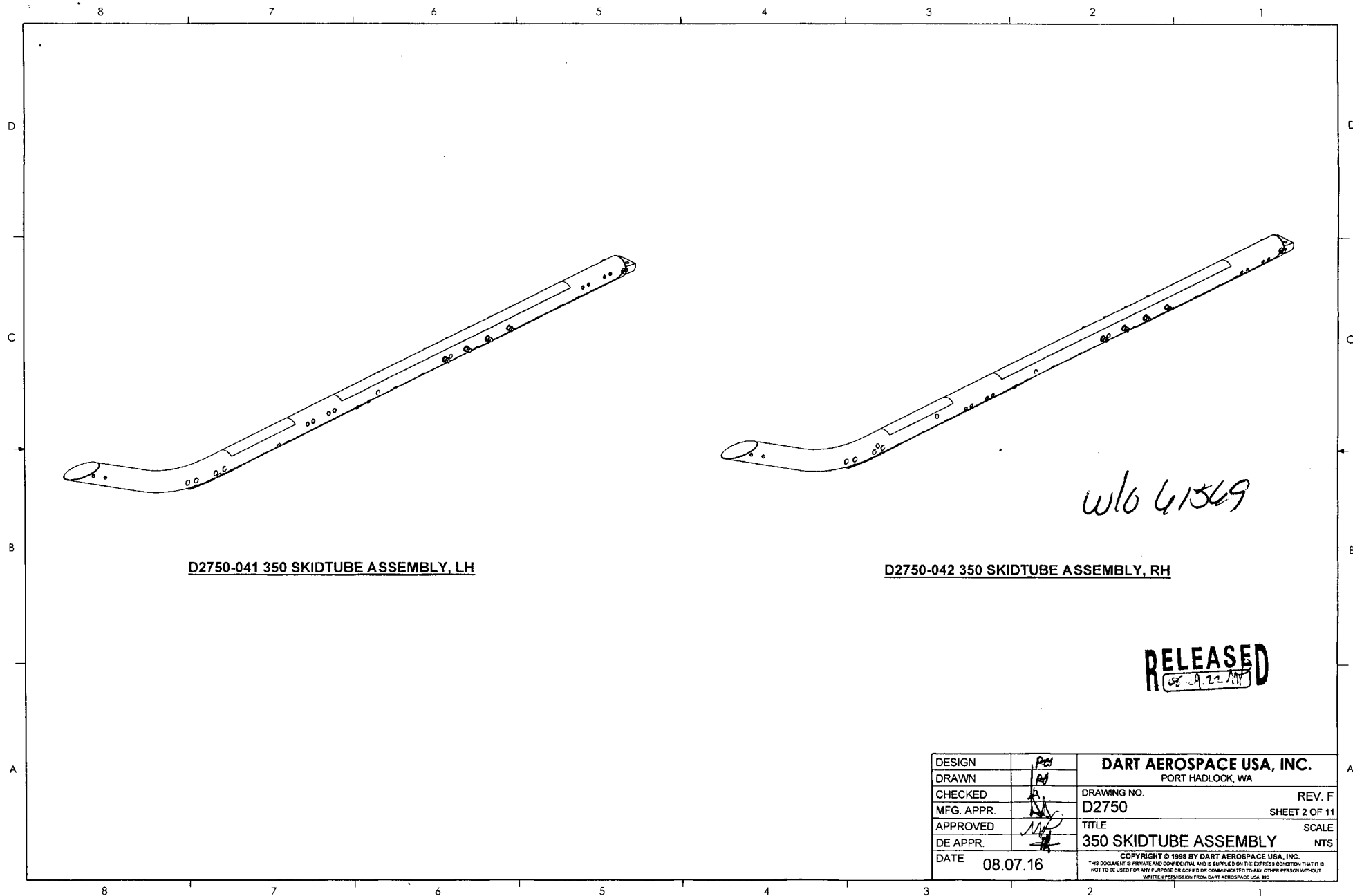
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-041 350 SKIDTUBE ASSEMBLY, LH

D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
18-9-22-11

DESIGN	PCW	DART AEROSPACE USA, INC.	
DRAWN	AV	PORT HADLOCK, WA	
CHECKED	AV	DRAWING NO. D2750	REV. F
MFG. APPR.	AV	SHEET 2 OF 11	
APPROVED	AV	TITLE	SCALE
DE APPR.	AV	350 SKIDTUBE ASSEMBLY NTS	
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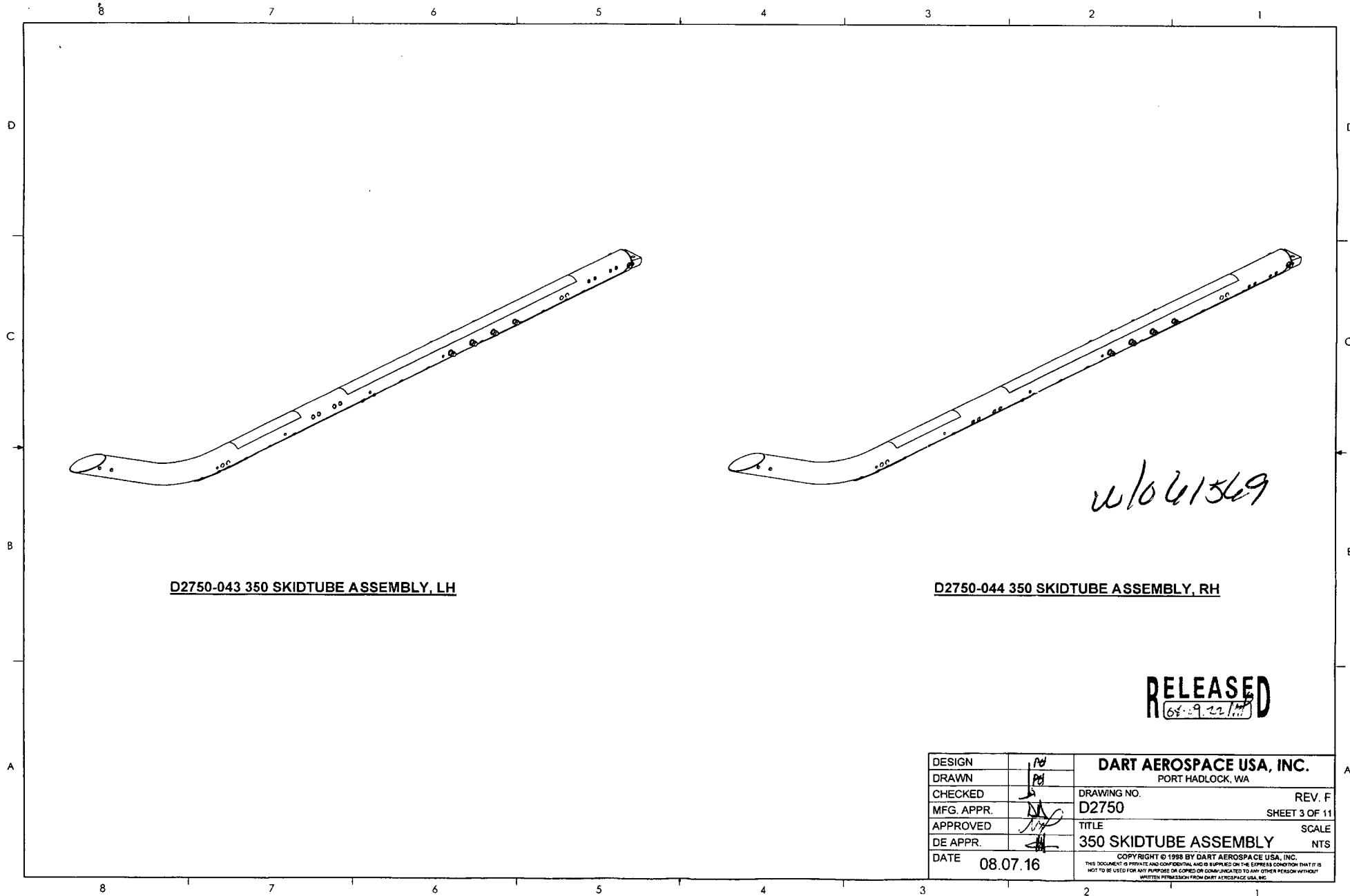
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/061569

RELEASED
68-9-22/111

DESIGN	PD	DART AEROSPACE USA, INC.	
DRAWN	PD	PORT HADLOCK, WA	
CHECKED	SA	DRAWING NO. D2750	REV. F
MFG. APPR.	SA	SHEET 3 OF 11	
APPROVED	SA	TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS
DE APPR.	SA	COPYRIGHT © 1988 BY DART AEROSPACE USA, INC.	
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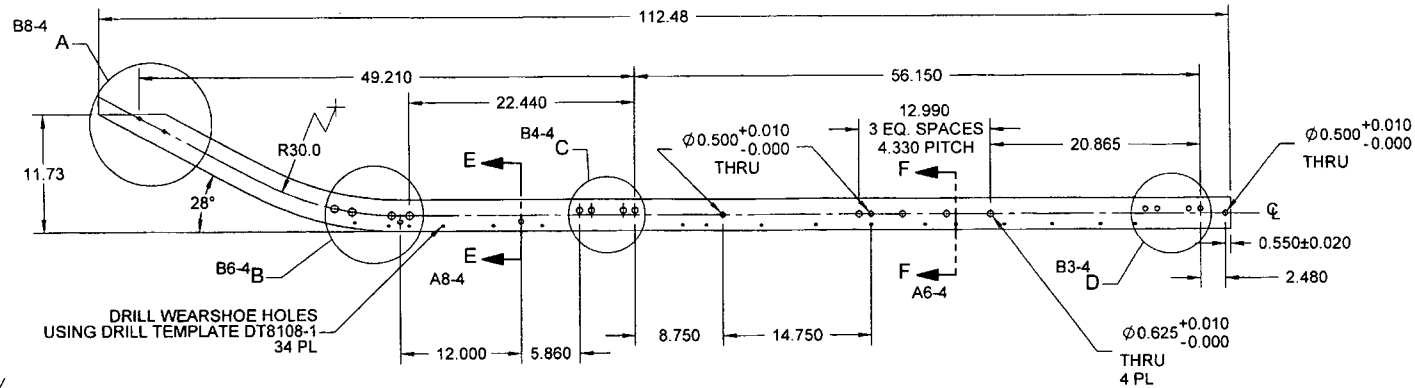
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

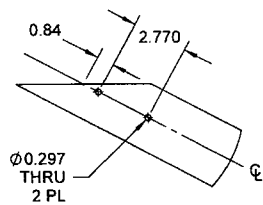
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

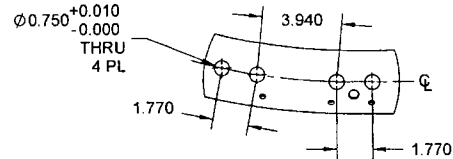
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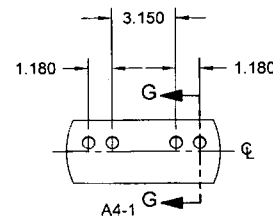
D2750-1 LH SKIDTUBE



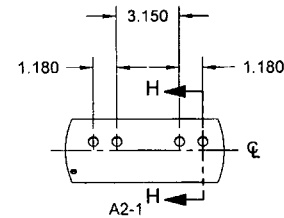
DETAIL A
SCALE 2X



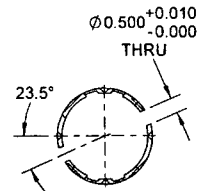
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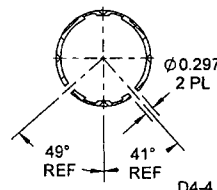
DETAIL C
SCALE 2X



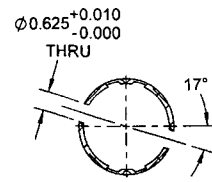
DETAIL D
SCALE 2X



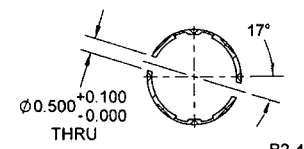
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

W/6 61569

RELEASED

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.			SHEET 4 OF 11
APPROVED		TITLE 350 SKIDTUBE ASSEMBLY	SCALE
DE APPR.			NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

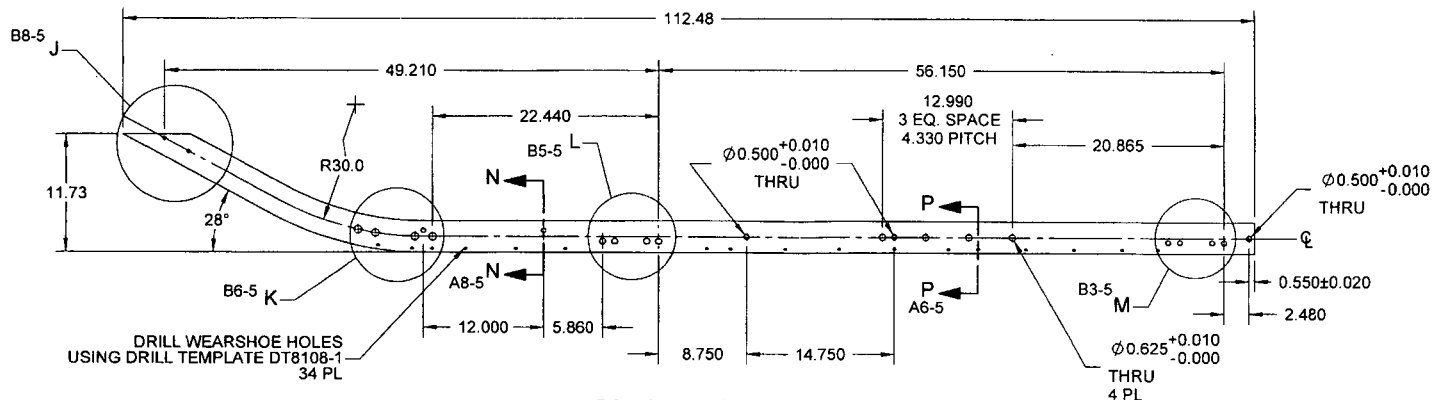
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

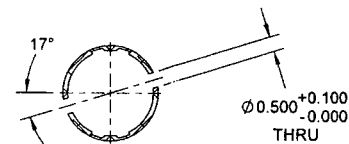
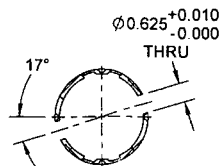
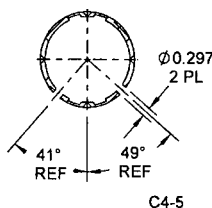
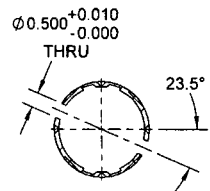
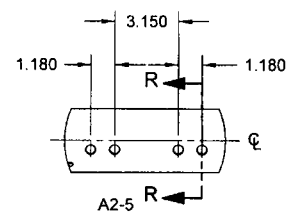
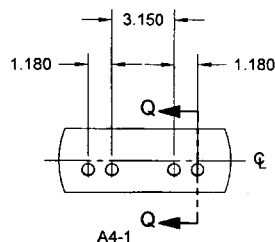
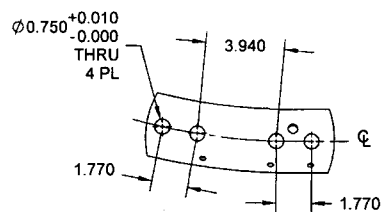
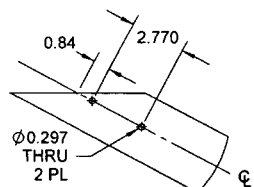
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-2 RH SKIDTUBE



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DESIGN	REV	DART AEROSPACE USA, INC.	
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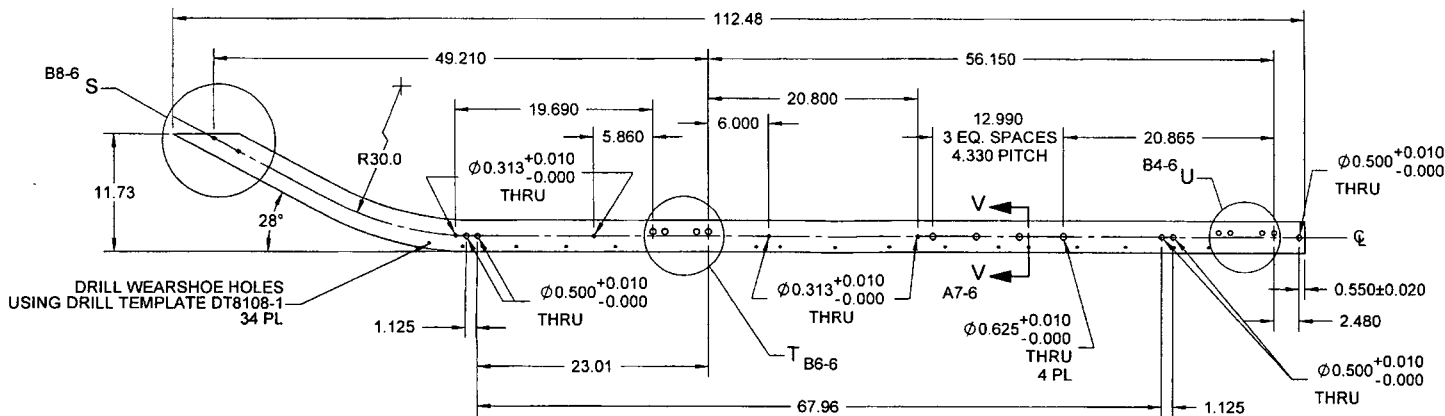
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

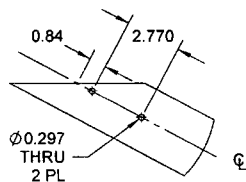
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

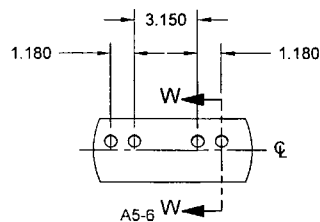
NOTE: Date & initial all entries



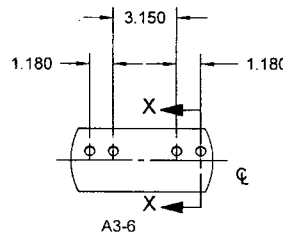
D2750-3 LH SKIDTUBE



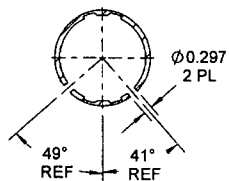
DETAIL S
SCALE 2X



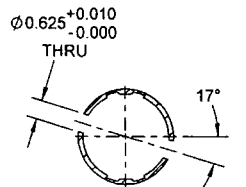
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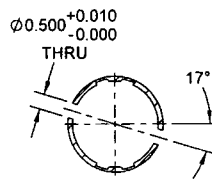
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

u/b 61369

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08-07-16

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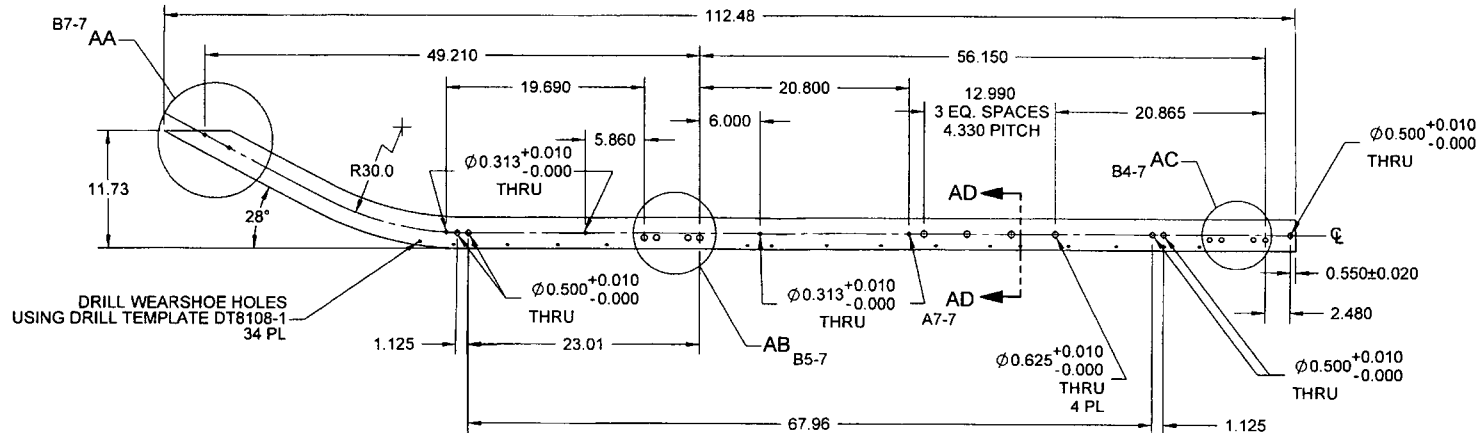
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

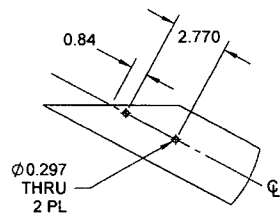
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

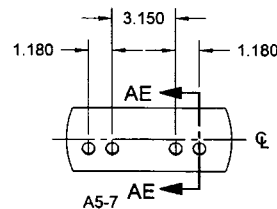
NOTE: Date & initial all entries



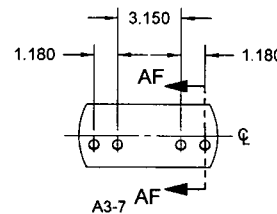
D2750-4 RH SKIDTUBE



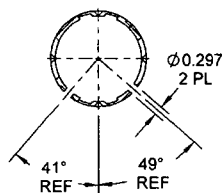
DETAIL AA
D7-7
SCALE 2X



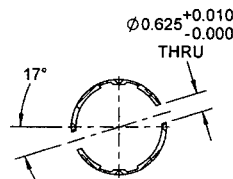
DETAIL AB
C4-7
SCALE 2X



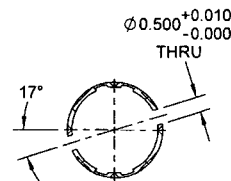
DETAIL AC
D3-7
SCALE 2X



SECTION AD-AD
D3-7
SCALE 3X, 17 PL









SECTION AE-AE
B6-7
SCALE 3X, 4 PL



SECTION AF-AF
B4-7
SCALE 3X, 4 PL

W/6 61549

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08-04-22-110

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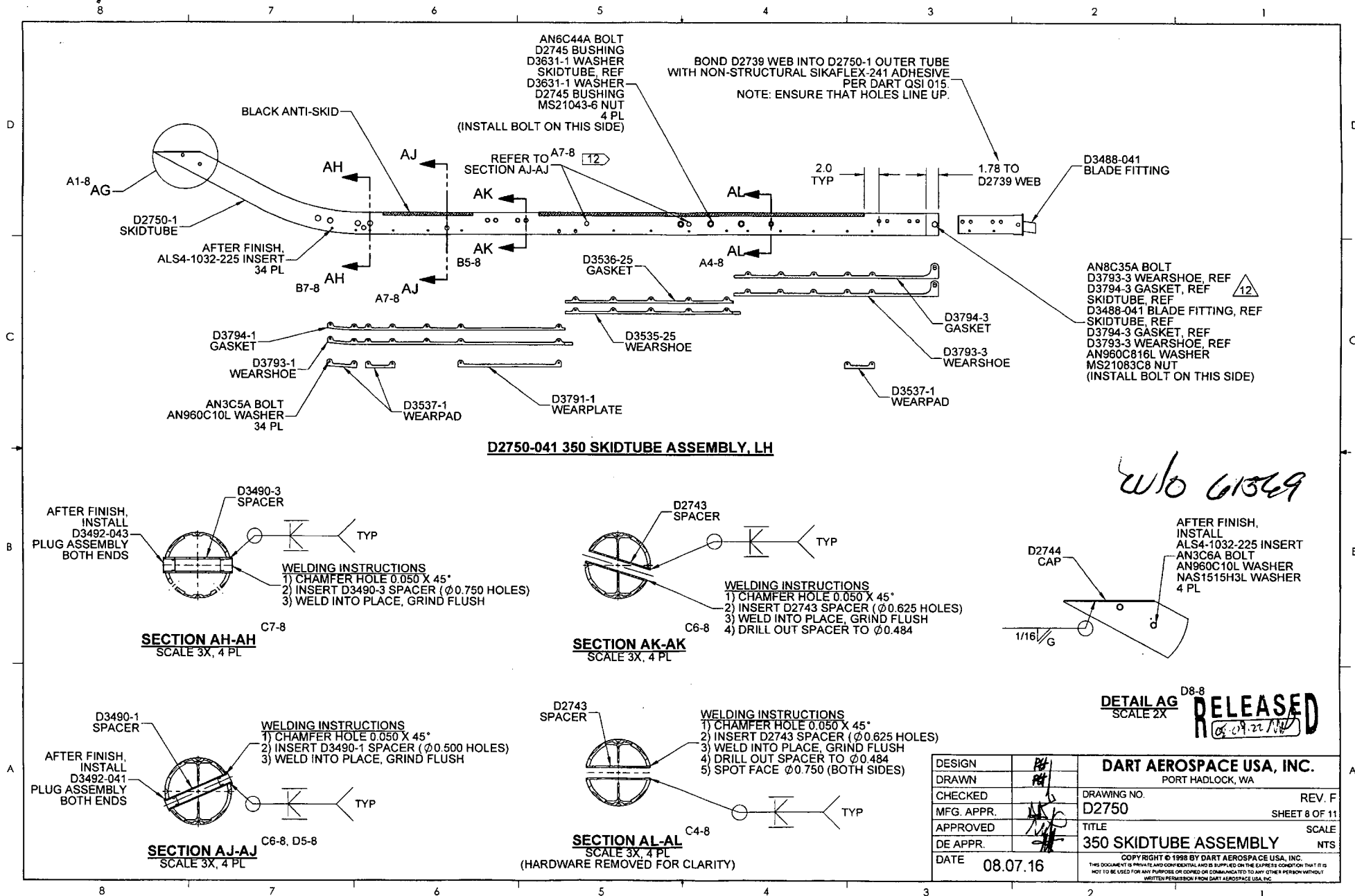
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



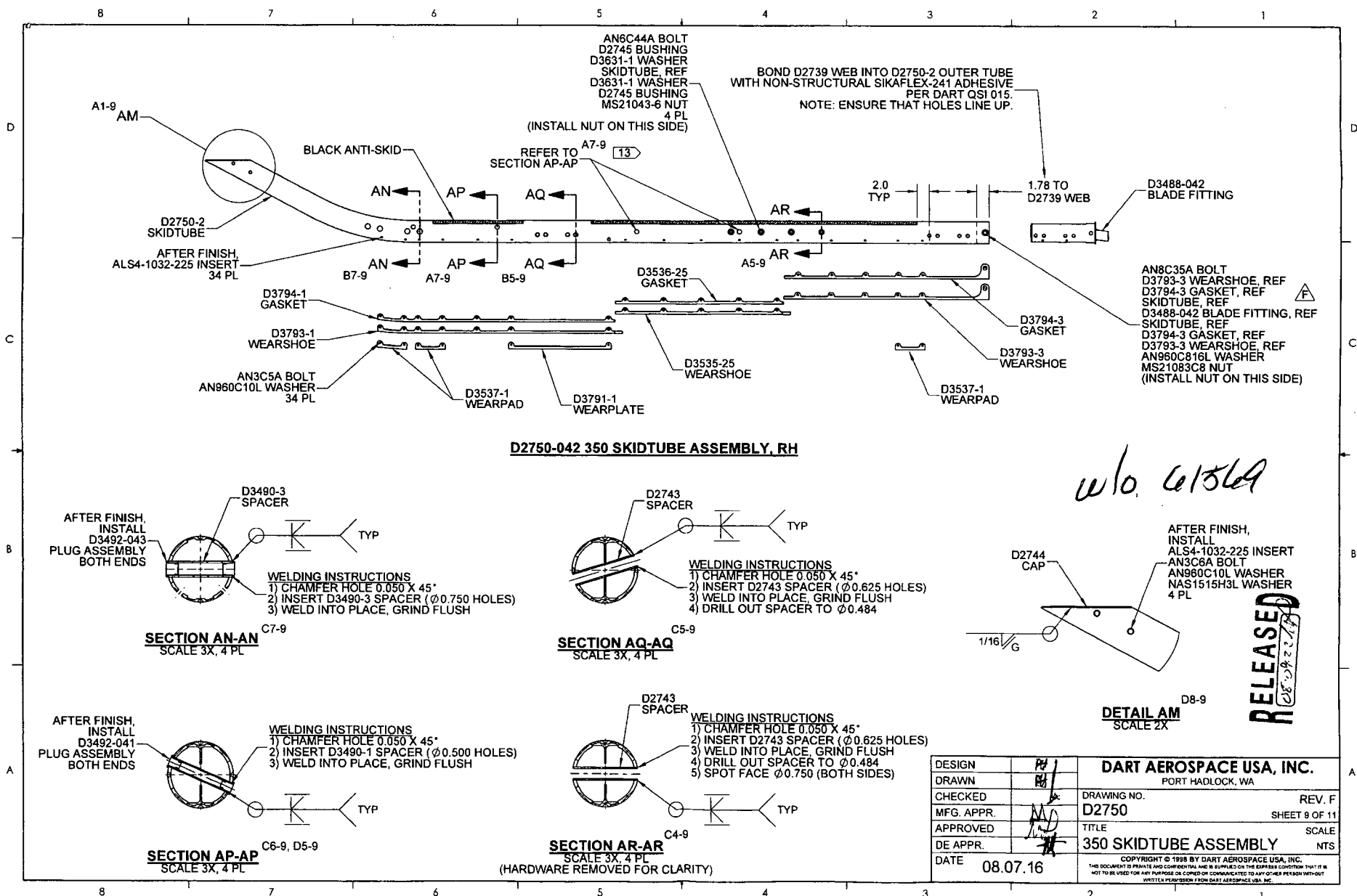
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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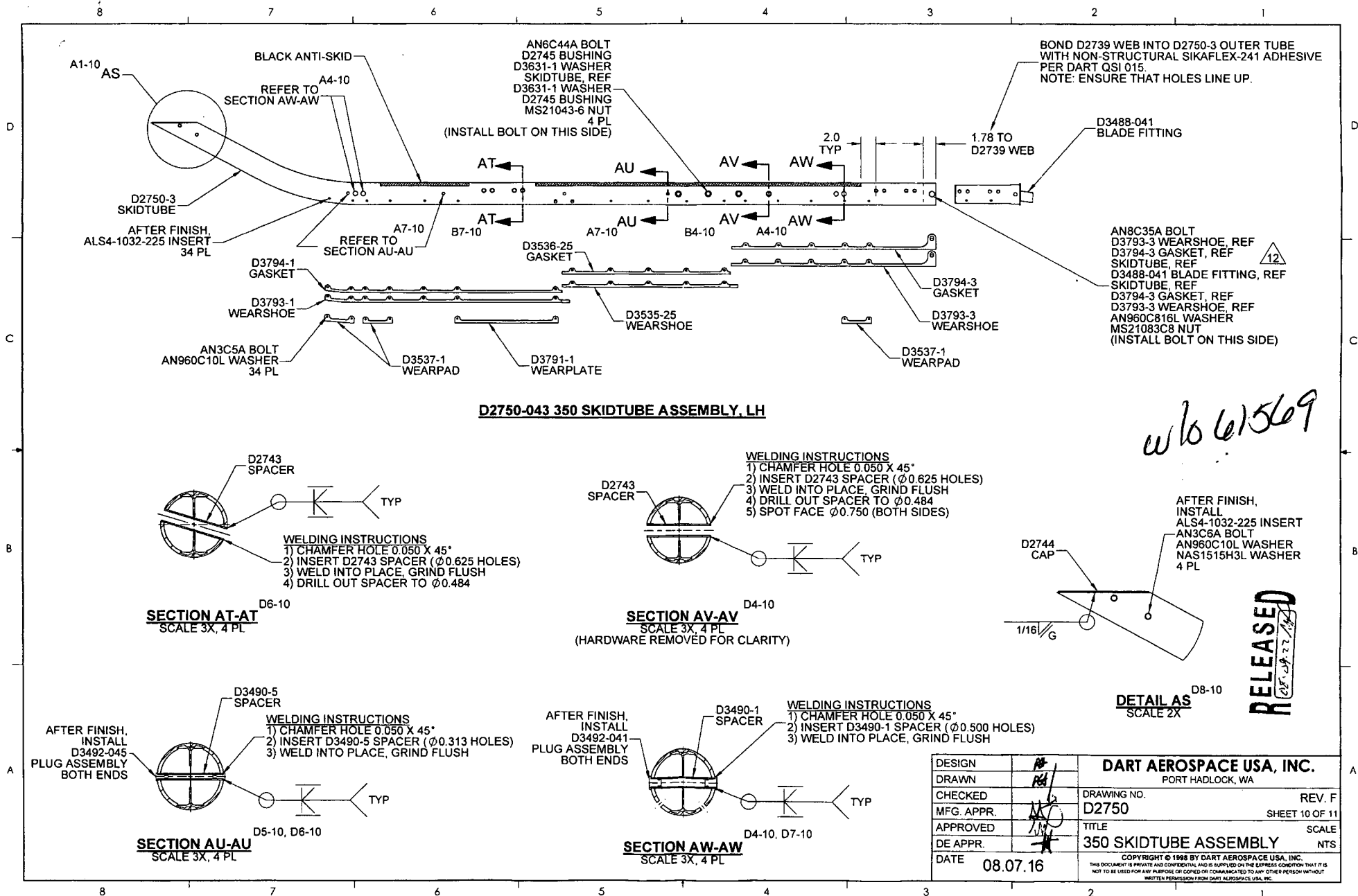
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	AS	DART AEROSPACE USA, INC.	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

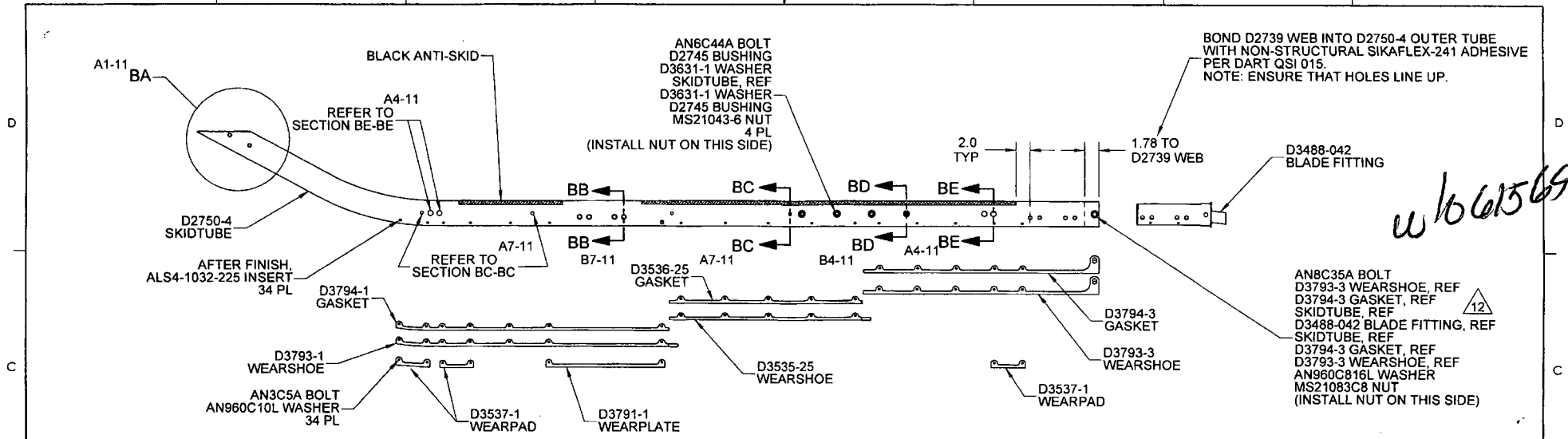
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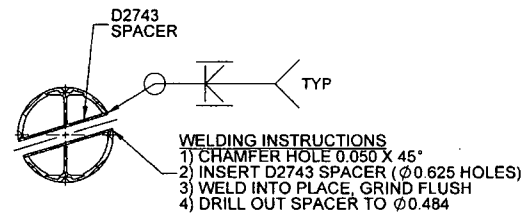
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

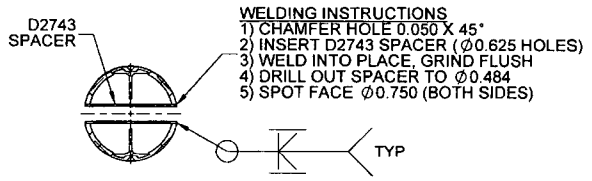
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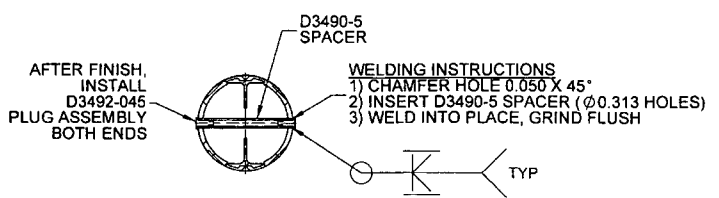
D2750-044 350 SKIDTUBE ASSEMBLY, RH



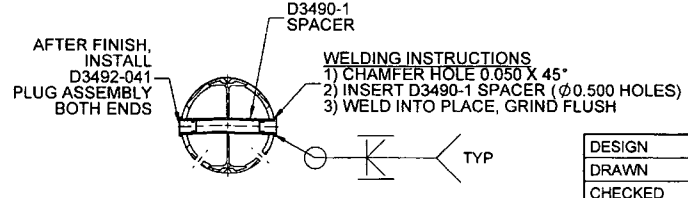
SECTION BB-BB
SCALE 3X, 4 PL



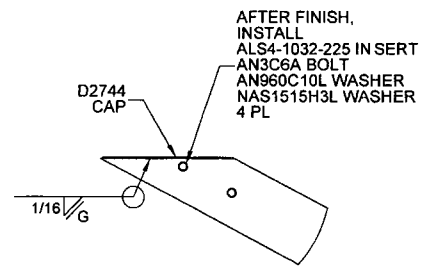
SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL



DETAIL BA
SCALE 2X

DESIGN	HA	DART AEROSPACE USA, INC.	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 236

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 60988
Part number: D350-436-012
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 10.08.12

Welder [Signature] Date of Test Coupon 10.08.12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld